

From: Obegi, Doug [<mailto:dobegi@nrdc.org>]
Sent: Friday, February 24, 2012 5:01 PM
To: Jemaa, Fethi Ben
Cc: Alemi, Manucher
Subject: comments on quantifying Ag WUE report

Dear Fethi & Manucher,

Below are our comments on the February 3, 2012 draft report on Quantifying Agricultural Water Use Efficiency. These comments echo many of the comments and recommendations that we made at the last ASC meeting, as well as throughout the ASC process. Feel free to call or email me if you have any questions about these comments.

Thanks,
Doug

1. Indicators of Water Use Efficiency

To the extent that the final report distinguishes between methodologies and indicators, as in this draft, the report should describe the indicators as “Indicators of Water Use Efficiency.” These indicators send a signal about agricultural water use efficiency, and while the report acknowledges that other factors affect the calculations, PAW and VAW nonetheless do provide an indication of how efficient agricultural water use is. The final report should state, as this draft states on page ES-3, that the PAW and VAW indicators are appropriate for use at the field scale. The report should also recommend voluntary implementation of these indicators.

The draft report continues to provide little to no positive statements about the PAW and VAW indicators (see, e.g., pages 23-24, including the pull quote on page 24). Section 4 should include a short introduction on the benefits and purposes of these indicators, following the format of section 3 (see page 16). Like the methods, the indicators also provide valuable information. The PAW metric has been used in the literature of water use efficiency, and at the last ASC meeting other members acknowledged that it was a legitimate comparison. In addition, the pull quote on page 24 is inflammatory and should be deleted.

2. Implementation of Methods and Indicators

The report needs to be substantially revised to make clear what can be implemented using existing authorities (without additional Legislative authorization), and what requires new Legislative authority. For instance, page ES-3 to ES-4 appropriately states that the Department will use existing authority to implement district level methods; elsewhere the report indicates that the Department will use existing authority to implement some of the indicators at the regional scale, as is already done in the Water Plan Update. The final report should include implementation by water districts at the district level, as described in these sections. However, Table 1, pages 28-29, and pages 32 to 40 to clarify what implementation steps require new authority, and which do not.

The estimated costs for implementing the methods and indicators also need to better distinguish between what are new costs, and what are existing costs. For instance, DWR already includes some productivity indicators in the Water Plan Update (*see* page 42); are the costs of implementing the productivity indicator at the regional level a new cost (*see* page ES-9). Likewise, it is wholly inappropriate to include the cost of installing and maintaining accurate water measurement devices at the water supplier scale for suppliers serving more than 25,000 acres of irrigated land, as those costs are already required under the agricultural water measurement regulation (*see* page ES-7, 46). These costs should be excluded from the report in order to avoid inflating the cost of implementing these methods. And the costs for mobile labs should distinguish between existing programs and costs and new programs and costs (*see*, e.g., pages 47-48).

3. Discussion of Beneficial Use

As NRDC has repeatedly cautioned, the report should make very few references to reasonable and/or beneficial use, because efficiency is not the same as beneficial use. We appreciate the report including language that distinguishes beneficial uses from efficiency (*see* page 7, stating that “Although these uses are beneficial, they may not be efficient.”). In addition, we believe that the table on page 6 is useful and should remain in the final report.

However, we also agree with other ASC members that the following language on page 7 should be removed: “Therefore, it is important to evaluate the efficiency of beneficial uses. The ratio of various beneficial uses such as the ones cited in Figure 1-1 (outputs) to total water use (input) is used to demonstrate and quantify the efficiency of beneficial water uses.” Similar language about beneficial uses on page 73 should also be removed (as well as language on page 18 regarding leaching and beneficial and reasonable use).

4. Agronomic Water Use

NRDC recommends that the description of agronomic needs on page 18 should more clearly distinguish between efficient levels of agronomic needs and water that is actually used for agronomic purposes (describing it as the water “directed” for agronomic uses, rather than as the water “needed” for agronomic uses, creates some of the confusion). The current language is somewhat confusing and could lead the reader to believe that any water used for agronomic purposes counts towards AN, which would be inaccurate. For instance, the Field Scale example on page 72 properly explains how agronomic uses can also double as water for ETAW (which reduces total AN), and the calculation of water required to meet the leaching fraction (pages 19-20) may reduce AN below the amount of water actually used for leaching (as well as possibly contributing to ETAW, as the report acknowledges). We appreciate DWR developing guidelines for quantifying agronomic needs in phase 2, and we strongly encourage DWR to include research on reducing agronomic needs as part of the program of implementation.

5. Delivery Fraction is not as a Method, but Should be Included an Indicator

NRDC continues to believe that the Delivery Fraction metric should be included as an indicator, but not a method of quantifying water use efficiency. As we have previously explained, and as

discussed at the last ASC meeting, DF does not use a water balance approach (unlike all the other methods) and it does not quantify the efficiency of water use in meeting crop needs and other objectives. Including DF as a method therefore is inconsistent with the description of efficiency methods on page 16. It does quantify the efficiency of the delivery system, which is a very useful indication of water use efficiency. As such, it should be included as an indicator.

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